

Claims

- [c1] 1. A method for controlling a document service request at a mobile computing device, comprising:
- initiating, at the mobile computing device, the document service request that includes a first parameter identifying a document accessible to a document server;
- obtaining, at the mobile computing device, device information identifying a type of output device available over one of two communications channels;
- adding, at the mobile computing device, the device information as a second parameter to the document service request;
- transmitting, from the mobile computing device, the parameters of the document service request to the document server over one of the two communications channels; and
- controlling, at the mobile computing device, a connection between the document server and the output device to transmit there between the document in a format suitable for the output device; the mobile computing device establishing the connection with the document server over a first of the two communications channels and with the output device over a second of the two communications channels.
- [c2] 2. The method according to claim 1, wherein the document server and the output device have no preexisting communications channel there between.
- [c3] 3. The method according to claim 1, wherein the document server and the output device have an inadequate preexisting communications channel there between.
- [c4] 4. The method according to claim 1, wherein the document server prepares the document identified by the first parameter in the format suitable for the output device.
- [c5] 5. The method according to claim 4, wherein the suitable format prepared by the document server conforms to at least one format that the output device is adapted to process.
- [c6] 6. The method according to claim 4, wherein the document server applies one of a document enrichment, translation, conversion, summarization, recommender service to the document before preparing the document in the suitable format.
- [c7] 7. The method according to claim 1, wherein the mobile computing device sets up a route between the document server and the output device.
- [c8] 8. The method according to claim 1, wherein the output device is one of a printer, a display,

a file server, and a speaker.

- [c9] 9. The method according to claim 1, wherein the format suitable for the output device is a device dependent format.
- [c10] 10. The method according to claim 1, wherein the first of the two communications channels is an unlimited communications channel and the second of the two communications channels is a limited communications channel.
- [c11] 11. The method according to claim 10, wherein the two communications channels are wireless communications channels.
- [c12] 12. The method according to claim 10, wherein the limited communications channel is a wired communications channel and the unlimited communications channel is a wireless communications channel.
- [c13] 13. The method according to claim 1, wherein the first and the second of the two communications channels are limited communications channels.
- [c14] 14. The method according to claim 1, further comprising processing the document service request at the document server by:
locating the document identified by the first parameter of the document service request;
loading a driver corresponding to the device information specified in the document service request;
rendering the located document using the loaded driver;
storing the rendered document in a print file; and
transmitting the print file to the mobile computing device over the first of the two communications channels.
- [c15] 15. The method according to claim 1, further comprising applying one or more specified service to the document as part of the document service request; wherein the one or more specified services is one of a summarization service, an enrichment service, a recommender service, and a translation service.
- [c16] 16. The method according to claim 1, further comprising recording the document service request for accounting purposes at the mobile computing device.
- [c17] 17. The method according to claim 1, wherein the mobile computing device transforms the

document into the format suitable for the output device.

[c18] 18. The method according to claim 1, wherein the device information is obtained by executing a discovery request at the mobile computing device.

[c19] 19. The method according to claim 1, wherein the device information is obtained using a profile of the output device and confirmed by executing a discovery request at the mobile computing device.

[c20] 20. The method according to claim 1, wherein one of the first of the two communications channels and the second of the two communications channels of the mobile computing device is routed through a second mobile computing device having at least two communications channels.

[c21] 21. The method according to claim 1, wherein the document server forms part of an input device.

[c22] 22. The method according to claim 1, wherein device information identifying the type of output device available over the first communications channel is a class of service.

[c23] 23. The method according to claim 22, wherein the class of service is wireless printing.

[c24] 24. The method according to claim 1, wherein the first parameter and the second parameter are specified using a name of the document.

[c25] 25. An article of manufacture, comprising:
a storage medium; and
program instructions stored on the storage medium for controlling a document service request on a mobile computing device having a processor; the processor in executing the program instructions:
initiating, at the mobile computing device, the document service request that includes a first parameter identifying a document accessible to a document server;
obtaining, at the mobile computing device, device information identifying a type of output device available over one of two communications channels;
adding, at the mobile computing device, the device information as a second parameter to the document service request;
transmitting, from the mobile computing device, the parameters of the document service request to the document server over one of the two communications channels; and

controlling, at the mobile computing device, a connection between the document server and the output device to transmit there between the document in a format suitable for the output device; the mobile computing device establishing the connection with the document server over a first of the two communications channels and with the output device over a second of the two communications channels.

[c26]

26. A mobile computing device for controlling a document service request, comprising:
a memory for storing program instructions; and
a processor for executing the program instructions stored in the memory; the processor in executing the program instructions:
initiating, at the mobile computing device, the document service request that includes a first parameter identifying a document accessible to a document server;
obtaining, at the mobile computing device, device information identifying a type of output device available over one of two communications channels;
adding, at the mobile computing device, the device information as a second parameter to the document service request;
transmitting, from the mobile computing device, the parameters of the document service request to the document server over one of the two communications channels; and
controlling, at the mobile computing device, a connection between the document server and the output device to transmit there between the document in a format suitable for the output device; the mobile computing device establishing the connection with the document server over a first of the two communications channels and with the output device over a second of the two communications channels.